

VERSION WITH MARKINGS TO SHOW CHANGES MADE

We Claim:

1. AMENDED A [surface mount] crossover component for crossing a conductor line over another conductor line printed on an integrated circuit, comprising:

a lowermost first dielectric layer;

a ground plane layer disposed above said first dielectric layer;

a second dielectric layer disposed above said ground plane layer; and

at least one conductor line disposed above said second dielectric layer, said conductor line traversing said second dielectric layer to provide an electrical path from one end of the crossover component to an opposed end thereof,

wherein said crossover component is a discrete component that may be mounted on the surface of said integrated circuit and wherein said first and second dielectric layers and said ground plane layer electrically and capacitively isolate, respectively, said at least one conductor line from the conductor line printed on the integrated circuit, such that current flowing through the crossover component via said at least one conductor line encounters no substantial interference from current flowing through the conductor line printed on the integrated circuit.

2. AMENDED The [surface mount] crossover component of claim 1, further comprising an input termination contact in electrical communication with an input end of said at least one conductor line and an output termination contact in electrical communication with an output end of said conductor line, wherein said ground plane layer is electrically isolated from said input and output termination contacts.

3. AMENDED The [surface mount] crossover component of claim 1, further comprising a second conductor line disposed above said second dielectric layer spaced laterally from said first conductor line, said second conductor line traversing said second dielectric layer to provide a second electrical path from the one end of the crossover component to the opposed end thereof.

*how
reptd
to 'at least one
line*

NA

? prop chw

4. AMENDED The [surface mount] crossover component of claim 3, further comprising a first input termination contact in electrical communication with an input end of said first conductor line, a first output termination contact in electrical communication with an output end of said first conductor line, a second input termination contact in electrical communication with an input end of said second conductor line, and a second output termination contact in electrical communication with an output end of said second conductor line, wherein said ground plane layer is electrically isolated from said first and second termination contacts.

NA

Which way (i.e. first or second layer)

5. CANCELLED [A crossover component comprising:

a functional surface mount component including a first conductor line;

a ground plane layer disposed on one of opposite major surfaces of said functional surface mount component;

a dielectric layer disposed adjacent said ground plane layer; and

at least one second conductor line disposed adjacent said dielectric layer, said second conductor at least one line traversing said dielectric layer to provide an electrical path from one end of the crossover component to an opposed end thereof,

wherein said dielectric layer and said ground plane layer electrically and capacitively isolate, respectively, said first and second conductor lines from one another, such that current flowing through the crossover component via said second conductor lines encounters no substantial interference from current flowing through said first conductor line.]

6. AMENDED The surface mount crossover component of claim [5]7, further comprising an input termination contact in electrical communication with an input end of said second conductor line and an output termination contact in electrical communication with an output end of said second conductor line, wherein said ground plane layer is electrically isolated from said termination contacts.

7. AMENDED A [surface mount]crossover component [of claim 5, further] comprising:[a third conductor line disposed adjacent said dielectric layer spaced laterally from said second conductor line, said third conductor line traversing said dielectric layer to provide a second electrical path from one end of the crossover component to an opposed end thereof.]

a functional surface mount component including a first conductor line;
a ground plane layer disposed on one of opposite major surfaces of said functional surface mount component;
a dielectric layer disposed adjacent said ground plane layer; and
at least one second conductor line disposed adjacent said dielectric layer, said second conductor at least one line traversing said dielectric layer to provide an electrical path from one end of the crossover component to an opposed end thereof,

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wherein said dielectric layer and said ground plane layer electrically and capacitively isolate, respectively, said first and second conductor lines from one another, such that current flowing through the crossover component via said second conductor lines encounters no substantial interference from current flowing through said first conductor line, further comprising a third conductor line disposed adjacent said dielectric layer spaced laterally from said second conductor line, said third conductor line traversing said dielectric layer to provide a second electrical path from the one end of the crossover component to the opposed end thereof.

which on

8. AMENDED The [surface mount]crossover component of claim 7, further comprising a first input termination contact in electrical communication with an input end of said second conductor line, a first output termination contact in electrical communication with an output end of said second conductor line, a second input termination contact in electrical communication with an input end of said third conductor line, and a second output termination contact in electrical communication with an output end of said third conductor line, wherein said ground plane layer is electrically isolated from said termination contacts.

which on

9. AMENDED A surface mount crossover component comprising first and second conductor lines electrically isolated from one another by an interposed dielectric layer and capacitively isolated from one another by an interposed ground plane layer, wherein current flowing through the crossover component via one of said first and second conductor lines encounters no substantial interference from current flowing through the other one of said first and second conductor lines.

Cancelling

10. The surface mount crossover component of claim 9, wherein said first conductor line extends in a first direction within a first plane, said second conductor line extends in a second direction within a second plane, and said first direction crosses said second direction.
11. The surface mount crossover component of claim 10, wherein said first direction crosses said second direction at an angle of about 90°.
12. CANCELLED [A surface mount crossover component, comprising:
a bottom ground plane layer;
a first dielectric layer disposed above said bottom ground plane layer;
at least one first conductor line disposed above said first dielectric layer;
a second dielectric layer disposed above said at least one first conductor line;
an internal ground plane layer disposed above said second dielectric layer;
a third dielectric layer disposed above said internal ground plane layer;
at least one second conductor line disposed above said third dielectric layer;
a fourth dielectric layer disposed above said at least one second conductor line;
and a top ground plane layer disposed above said fourth dielectric layer;
wherein a current flowing through said surface mount crossover component via one of said first and second conductor lines encounters no substantial interference from current flowing through the other one of said first and second conductor lines.]
13. AMENDED The surface mount crossover component of claim [12]15, wherein said first conductor line extends along a first direction and said second conductor line extends along a second direction crossing said first direction.

Cancelled

14. CANCELLED [The surface mount crossover component of claim 12, further comprising a first input termination contact in electrical communication with an input end of said first conductor line, a first output termination contact in electrical communication with an output end of said first conductor line, a second input termination contact in electrical communication with an input end of said second conductor line, and a second output termination contact in electrical communication with an output end of said second conductor line.]

15. AMENDED A [surface mounted]crossover component[of claim 14], comprising:[wherein said component is generally shaped of a parallelepiped with said first input and output termination contacts arranged along one pair of diagonally opposed corners of the crossover component, and the second input and output termination contacts arranged along the other pair of diagonally opposed corners of the crossover component.]

a bottom ground plane layer;

a first dielectric layer disposed above said bottom ground plane layer;

at least one first conductor line disposed above said first dielectric layer;

a second dielectric layer disposed above said at least one first conductor line;

an internal ground plane layer disposed above said second dielectric layer;

a third dielectric layer disposed above said internal ground plane layer;

at least one second conductor line disposed above said third dielectric layer;

a fourth dielectric layer disposed above said at least one second conductor line; and

a top ground plane layer disposed above said fourth dielectric layer;

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wherein a current flowing through said surface mount crossover component via one of said first and second conductor lines encounters no substantial interference from current flowing through the other one of said first and second conductor lines, further comprising a first input termination contact in electrical communication with an input end of said first conductor line, a first output termination contact in electrical communication with an output end of said first conductor line, a second input termination contact in electrical communication with an input end of said second conductor lines, and a second output termination contact in electrical communication with an output end of said second conductor lines wherein said component is generally the shape of a parallelepiped with said first input and output termination contacts arranged along one pair of diagonally opposed corners of the crossover component, and the second input and output termination contacts arranged along the other pair of diagonally opposed corners of the crossover component.

16. AMENDED The [surface mount]crossover component of claim 14, wherein said ground plane layers are electrically isolated from said termination contacts.

Cancelled